

# Nurses' Knowledge and Awareness of Infection Disease Control Measures in AL-Hilla City at-Murjan Teaching Hospital

Noor Moosa Kadhim AL-Bayati<sup>1</sup>, Naji Yasser Saadoon AL-Mayahi<sup>2</sup>

<sup>1</sup>Department of Community Health Nursing, College of Nursing, University of Babylon, Iraq

<sup>2</sup>Department of Community Health Nursing, College of Nursing, University of Babylon, Iraq

## Abstract

**Background:** Early detection and prompt response are crucial measures to prevent and control outbreaks. therefore, a crucial part of system-wide quality assurance is prevention. **Objectives:** The present study aims to assessing nurses' knowledge related to communicable disease control precautions. Identify socio-demographic characteristics of the study sample. **Methodology:** A descriptive design study conducted on a non-probability (Convenient Sample), selected from were randomly selected - in order to achieve the declared goals, and to identify the social and demographic characteristics of the study sample, starting from the period 17th march, 2021 to 15th May 2022. Samples were taken in an appropriate manner. Through a comprehensive review of the relevant literature and previous studies, a questionnaire was prepared for the purpose of the study. As a tool for collecting information to achieve the objective of the study, which consists of two parts, the first part: demographic characteristics of nurses, and the second part is the nurses' knowledge related to precautions for controlling communicable diseases. two statistical approaches were used for analyzed the data of the research. Data were collected through the self- report method was constructed. **Results:** According to the study findings, the majority of the sample members did not attend the training courses for the communicable diseases of both sexes, and they have little knowledge, at a significant level ( $P \leq 0.05$ ), with regard to gender, the majority of them are males. **Conclusion:** The study summarize that the majority of health workers are not trained in the infectious disease control program for both sexes. Moreover, the majority of staff do not adhere to the axis of the hand washing program in addition to the protocols laid down for the prevention and control of infection **Recommendations:** The study recommends to application and training for national program commmunicable disease control, and continuous medical educational program for all staff is the most important point..

**Keywords:** Knowledge, Awareness, Infection Disease

## 1. Introduction

Illnesses have important impact on human life and place a significant strain on a country's economy and infrastructure, the world's poorest people continue to be the ones most affected by infectious diseases. Today and every day, the lives of millions of people are in the hands of health-care systems. Illnesses have important impact on human life and place a significant strain on a country's economy and infrastructure, the world's poorest people continue to be the ones most affected by infectious diseases [1]. The CDC recommends mitigation strategies that schools can implement to decrease the likelihood of SARS-CoV-2 transmission, the virus that causes coronavirus disease 2019. (COVID-19) [2]. Iraq's health system has faced numerous challenges, including the world's largest mass displacement in 2014-2016, as well as internal conflict a few years ago, all of which have had an impact on the health system. The Iraqi government used a number of proactive measures to reduce the morbidity rate of COVID-19, including a boycott of gathering areas, lockout, school closure, social distance, and mass quarantine [3]. Covid-19, disease, has emerg-ed-as a new no-tifiable infectious disease in Iraq, and changed the modality of notifiable infectious

diseases in Iraq, in-addition, there were (123102) patients with-notifiable communicable diseases other than Covid-19 disease recorded by the state and, local health authorities in Iraq-in 2020 [4]. A malfunctioning healthcare system has political, economic, cultural, and social dimensions. Poor quality health-care has a direct impact on users' quality of life. This is clearly demonstrated during the global COVID-19 pandemic. Nurses are often the first to encounter infected patients, so they play an important role in prevention. Every year, they affect a large number of patients and health-care workers, and they frequently lead to epidemic amplification, the effect of health-care-associated infections, according to available evidence, includes prolonged hospital stays, long-term disability, increased antimicrobial resistance in microorganisms, and a massive financial burden on health-care systems [5].

## 2. Methodology

A descriptive study was conducted in order to achieve the early stated objectives, to asseses nurses knowledgee communicable disease control precautions and to know the applicability of the (CD) Program in AL- Hilla Teaching Hospitals. The study was conducted from the period 15<sup>th</sup> of September 2022 to the 20<sup>th</sup> of Novmber 2022. A non- probability

(Convenience sampling), through. Sampling was performed by convenient sample, which consists of (200) nurses in the epidemiological wards, were selected as randomly. Data were collected through the self-report method was constructed. The data collected with the use of surveys that have been designed, which contain of (2) parts. Part one; demographic characteristics. Part two: which consisting of (11) objects about nurses knowledge level of related to communicable disease control precautions (practice of hands washing), which were concerned with importance axis about CD Program, the grand mean of score was applied to the health

worker's practices sections (observational checklist), and these items were scored on, adichotomous Likert scale (Yes=1); (No=2), two statistical approaches were used for analyzed the data of the research .The measurement of the following:

- (1) Frequency, Percentage, and Mean of Score are used in a descriptive statistical method.
- (2) A Chi-Square test is used in an inferential statistical technique. The significance of the results was established at ( $P = 0.05$ ) and not significant at ( $P = 0.05$ ).

### 3. Results

**Table 1: Distribution of the study sample related to their socio demographical characteristics**

variables	(N=200)	F	%
Age (years)	-29	76	38
	30-39	43	21.5
	40-49	35	17.5
	50 above	46	23
	Total	200	100%
Gender	Male	160	80
	Female	40	20
	Total	200	100%
Training for CDC Program	Yes	88	44
	No	112	56
Marital status	Single	53	26.5
	Married	127	63.5
	Widowed	5	2.5
	Divorced	11	5.5
	Separated	4	2
	Total	200	100 %
Residence	Urban	153	76.5
	Rural	47	23.5
	Total	200	100%
Level of education	Secondary Nursing School	55	27.5
	Institute (Diploma)	70	35
	College & above	75	37.5
	Total	200	100 %

Note: (N) is the number of samples, (F) is the frequency, and (%) is the percentage,  $P$  value  $\leq 0.05$

**Table 2: Nurses Knowledge Level of The Study Sample Related to Communicable Disease Control Precautions (Practice of Hands Washing)**

List	Standards	Yes		No		Chi-Square $\chi^2$	P-value	M.S	Sig.
		F.	%	F.	%				
a1	Hand washing before caring for the patient	103	51.5	97	48.5	0.180	0.671	1.48	N.S
a2	The routine washing hands before & after contact with the patient	70	35	130	65	18.000	<0.0001	1.65	S**
a3	I taking the necessary precautions for prevention and control of infection	180	90	20	10	130.25	< 0.0001	1.09	S**
a4	I following the protocols laid down for prevention and control of infections	90	45	110	55	2.000	0.157	1.5	N.S
a5	Scrubbing hub with antiseptic	112	56	88	44	2.880	0.090	1.44	N.S
a6	Sleeves above the elbow	55	27.5	145	72.5	40.500	< 0.0001	1.72	S**
a7	Hands free of jewelry and other accessories	185	92.5	15	7.5	144.500	< 0.0001	1.07	S**
a8	Avoid recontamination of hands at switching of the tap	163	81.5	37	18.5	81.05	< 0.0001	1.18	S**
a9	The liquid soap is applied	93	46.5	107	53.5	0.98	0.322	1.53	N.S
a10	Wash hands for no less than 40-60 seconds	113	56.5	87	43.5	3.380	0.066	1.43	N.S
a11	Hand washing after caring for the patient	180	90	20	10	130.25	< 0.0001	1.09	S**
Total Chi-Square ( $\chi^2$ ) = 387.552									
Total (P-value) = < 0.0001,									

Note: - Sig. (Level of Significant) at  $P < 0.05$  to  $> 0.01$ . M.S (Mean of Scores F. Frequency, S. significant, N.S. (Non- Significant at  $P > 0.05$ )

### 4. Discussion

Various research has discovered that socio-demographic variables and data play a significant role, staff health behaviors have an impact not only on their own health but also on their ability to provide health promotion services to their patients. Despite the fact that different occupational groups

work in hospitals, few studies have compared their health behaviors<sup>[6]</sup>.

This research was carried-out in Mugla City. The goal of this research was to look at the correlation between Turkish primary health care employees' , also, this finding supported by an Iraq study conducted by<sup>[7]</sup>, they found that the majority was 67 (33.5 %) of the study sample in the age group

between (-29) years. The results of current study show most participants were male (staff) aged greater than 25 years old, the findings revealed that more than half of the participants were men, with the largest percentage being males, were (80%) from male staff, and (40%) from female staff, this result might be explain by the study's low male participation rate, this results agrees with the study of [8], indicates that more than half of the sample (66.2%) were male while (33.8%) were female, that there is a shortage of female nurses who are working in the epidemic wards, we realized that participants put what they learned from the program to use and highest percentage was among staff (56 %), most of them were colloge of the nurse. This result is consistent with findings from the in Cambodia [9], they discovered that they did not receive any training courses at the hospital, whereas 88 (44%) received at least one course after conducting a mixed methods evaluation of the program's outcomes and impact on the graduates and health centers. Table (1): Reveals that most of these health workers (37.5%) are graduates from college of nurse .While (27.5 %) are graduated from secondary school of nursing and the (35 %) graduated from institute of nursing. These findings agree with the findings study of [10], who found that, (the socioeconomic variable indicates that those consumers are associated moderate socio-economic status) of the participants in his study were from medical institution group. The majority of the participants in this study were rural residents, according to the findings, this might be related to the fact that the trial was conducted in a tertiary hospital that provides specialized health care. Hand hygiene is the most crucial method of preventing HAI and other diseases., this indicates the routine of hand washing is essential before and after patient care, the current study agree [11]. This study also found that hand washing stations were widely available (98%). However, only 28% of the sinks were fully functional, with water flowing from their taps all day, according to a study prepared by [12], which found that (65.5%) of the studied healthcare workers lack infection control training, and that periodic education programs, particularly for health workers with many years of experience, are urgently needed to help them maintain clinical skills and refresh their knowledge.

## 5. Conclusion

Deficit of knowledge about CD training for both genders, which is measured as a major disaster to avoid infection in hospitals. The majority of staff do not adhere to the axis of the hand washing program in addition to the protocols laid down for the prevention and control of infection, the study summarize that the majority of health workers are not trained lack of material and medical supplies like liquid soap, disinfectants. The study findings revealed that the majority of the participants did not wash their hands properly.

## 6. Recommendations

The study recommends to application and training for national program communicable disease control, and continuous medical educational program for all staff is the most important point. Encouraging staff to improve their knowledge through health education, to adhere to infection prevention and control guidelines.

## References

- Akkurt N, Al-Jumaili MH, Ocak H, Cakar F, Torun L. Synthesis and liquid crystalline properties of new triazine-based  $\pi$ -conjugated macromolecules with chiral side groups. *Turkish Journal of Chemistry*. 2020;44(3):726-35.
- AL-Tae MH, Hajwal SK, Salma KJ. quality of health care through clients'satisfactions at outpatient consultancy clinics in al-hilla city hospitals, Iraq. *Turkish Journal of Physiotherapy and Rehabilitation*.;32:3.
- Al-Zubaidi BK, Al Gailani SS. Quality Assurance of Nursing Performance in Surgical Wards. *Iraqi National Journal of Nursing Specialties*. 2007;20(1, 2).
- Chiou ST, Chiang JH, Huang N, Chien LY. Health behaviors and participation in health promotion activities among hospital staff: which occupational group performs better? *BMC health services research*. 2014 Dec; 14:1-7.
- Horváth C, Hong K, Wheeler P, Ir P, Chhea C, Kinzer MH, Ly V, Willacy E. How management and leadership training can impact a health system: evaluation findings from a public health management training program in Cambodia. *Frontiers in Public Health*. 2022 Jan 26; 9:784198.
- Hussar B, Zhang J, Hein S, Wang K, Roberts A, Cui J, Smith M, Mann FB, Barmer A, Dilig R. *The Condition of Education 2020*. NCES 2020-144. National Center for Education Statistics. 2020.
- Barrios-Ipenza F, Calvo-Mora A, Criado-García F, Curioso WH. Quality evaluation of health services using the Kano model in two hospitals in Peru. *International Journal of Environmental Research and Public Health*. 2021 Jun 7;18(11):6159.
- McGovern OL, Stenger M, Oliver SE, Anderson TC, Isenhour C, Mauldin MR, Williams N, Griggs E, Bogere T, Edens C, Curns AT. Demographic, clinical, and epidemiologic characteristics of persons under investigation for Coronavirus Disease 2019—United States, January 17–February 29, 2020. *Plos one*. 2021 Apr 15;16(4): e0249901.
- Okoroiwu HU, Uchendu KI, Essien RA. Causes of morbidity and mortality among patients admitted in a tertiary hospital in southern Nigeria: a 6-year evaluation. *PloS one*. 2020 Aug 25;15(8): e0237313.
- Onyedibe KI, Shehu NY, Pires D, Isa SE, Okolo MO, Gomerep SS, Ibrahim C, Igbunugo SJ, Odesanya RU, Olayinka A, Egah DZ. Assessment of hand hygiene facilities and staff compliance in a large tertiary health care facility in northern Nigeria: a cross

sectional study. *Antimicrobial Resistance & Infection Control*. 2020 Dec; 9:1-9.

Taha TY, Qassim WJ. Quality of health care system and structure at primary health care in Baghdad city. Prof. (Dr) RK Sharma. 2021 Jan;21(1):1081.

Fawole OI, Onadeko MO. Knowledge and management of malaria in under five children by primary health care workers in Ibadan South-east local government area. *The Nigerian Postgraduate Medical Journal*. 2001 Mar 1;8(1):1-6.